Sports Drinks

**Question:** During a game you usually drink Gatorade or water to stay hydrated. Does it work? Does it improve the way you play?

Hypothesis- I think that they just keep you hydrated but they don’t actually improve the way you perform.

Background Information:

* Energy drinks can cause our heart rate and blood pressure to increase, and can cause us from losing sleep that we need.
* It also makes us dehydrated if we use it during exercise
* Caffeine masks the intoxicating effects that would normally trigger the body to pass out.
* When you depend on energy drinks, you miss out on essentials such as fiber and good quality protein.

Variables:

* Independent- the different drink each runner consumes.
* Dependent- the effect the different drinks had on the runners and the differences it made between genders.
* Controlled- The amount and kind of drink that each person uses, and how far they run.

Materials:

* Stop Watch
* 8 Cups
* 8 Subjects (4 girls, 4 boys)
* Measuring Cup
* A journal or graph to record data
* 1 Sports Drinks + water
  + Gatorade

Procedure:

* Time your subjects when the run from basketball ½ court line to basketball baseline, then full court and back (this is their “before” time).
* After they run, have each one of them drink one of the same energy drinks.
* Have them drink ½ cup of the drink.
* EVERYONE NEEDS TO DRINK ALL THE DRINKS!!
* Wait at least 15 minutes before you time them again
* It may take a few days for every person to drink all the energy drinks.
* Time them again after they drink the energy drink when they run from the basketball baseline court line to basketball baseline, then ½ court and back.
* Record Data

Results:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Before** | **Gatorade** | **Water** |
| **Caleb** | 18.12 | 18.28 | 20.51 |  | **Before** | **Water** | **Gatorade** |
| **Ian** | 18.72 | 18.38 | 20.15 | **Destiny** | 19.41 | 20.44 | 18.56 |
| **Cody** | 17.91 | 16.93 | 19.35 | **Andi** | 15.78 | 18.36 | 16.28 |
| **Cameron** | 16.97 | 18.00 | 20.46 | **Sarah** | 21.16 | 22.41 | 20.12 |
|  |  |  |  | **Chelsey** | 21.35 | 21.97 | 22.35 |

Times are recorded in seconds!

Conclusion: Some people’s reaction to the Gatorade was better than their “before” time. Others seemed to be slower after they drank the Gatorade. Their times with the water were close to their normal times. I think the Gatorade times were a little better than their normal times because the sugar gave them a burst of energy.

Possible Causes of Error:

* If the runners had a snack before they ran (this could affect their time).
* If the runners were already tired from previous exercise.
* If the affect of the energy drink wore off.
* Stop watch malfunction.

For Future Research:

For further research, I could see if there is an “after effect” when they consume the drink. Does it make the runners extremely tired? How long does their energy actually last?

Works Cited:

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